

Charting the Course of SDG in Romblon State University: A Study on the Students' SDGs

Level of Awareness

Jayson Reeves C. Mani

International Relations Office, Romblon State University

jaysonmani@rsu.edu.ph

[ORCID.0009-0008-6783-7848](https://orcid.org/0009-0008-6783-7848)

Dave D. Lota

International Relations Office, Romblon State University

dlota@rsu.edu.ph

Garry Vanz V. Blancia

Research, Development, and Innovation, Romblon State University

garryvanzblancia@gmail.com

Abstract

Sustainable Development Goals (SDGs), established by the United Nations in 2015, represent a global call to action addressing the world's most pressing challenges. As institutions of higher education preparing students for the future, fostering SDG awareness has become increasingly vital. This study highlights the level of Sustainable Development Goals (SDGs) awareness and the structural relationship between SDG levels and students' Year level. Results revealed that students in RSU have high levels of SDG awareness. SDG 3-Good Health and Well-being and SDG 4-Quality Education were also seen as most visible in the university. Structural Equation Modeling revealed that year level significantly predicts ($R^2 = 0.224$, $p = .000$) the SDG awareness level of university students which denotes that SDG awareness activities should differ per year level, advancing and improving as year level of students

progresses. Enhancing curriculum alignment with SDGs, providing more institutional support for SDG-related activities, and addressing the awareness gap could significantly boost the university's contribution to sustainable development.

Keywords: *SDG awareness, structural relationship, year level, southern-tagalog university, SDG activities*

Introduction

The Sustainable Development Goals established by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development represent a comprehensive framework to address a wide range of global challenges, from alleviating poverty and hunger to promoting gender equality, mitigating climate change, and ensuring sustainable communities (Shehu & Shehu, 2018). These goals serve as a vital blueprint for educational institutions to integrate sustainability into their curricula, thereby fostering awareness and understanding among students, who are future leaders and change-makers in their communities (Shehu & Shehu, 2018). Moreover, the successful integration of the SDGs within higher education not only enhances students' knowledge and skills related to sustainability but also prepares them to contribute effectively to achieving these global goals, reinforcing the important role that education plays in promoting sustainable development across all sectors (Shehu & Shehu, 2018) (Schulz et al., 2023; Crespo et al., 2017; and Filho et al., 2019).

Romblon State University, a state university in the Southern-Tagalog region in Philippines, has undertaken a significant initiative to assess the current level of awareness and understanding of the SDGs among its student population. This study aims to provide a baseline assessment of students' knowledge, curriculum integration, personal relevance, and behavioral

indicators related to the SDGs across various colleges and institutes within the university, including the College of Engineering and Technology, College of Education, College of Arts and Science, College of Business and Accountancy, and the Institute of Information Technology. By employing a survey-based methodology, this research seeks to gather quantitative data that will inform the effectiveness of existing educational strategies related to the SDGs and identify areas for improvement in promoting sustainability education at the university level, thereby contributing to a more informed and engaged student body capable of driving positive change in their local and global communities (Filho et al., 2019; Crespo et al., 2017).

In aligning with the global agenda set forth by the UN, this research not only highlights the critical need for awareness among future professionals but also emphasizes the urgency for educational institutions like Romblon State University to enhance their curricula in ways that foster meaningful engagement with the Sustainable Development Goals (Shehu & Shehu, 2018; Kleespies & Dierkes, 2022; Filho et al., 2019; and Schulz et al., 2023).

The importance of the Sustainable Development Goals in the context of higher education cannot be overstated. The role of universities in equipping students with the knowledge and skills necessary for realizing these goals is paramount, as they are instrumental in shaping the attitudes and perceptions of future leaders who will navigate the complexities of sustainability challenges in various fields (Kleespies & Dierkes, 2022).

Moreover, research indicates that universities have a unique responsibility to actively engage students with the SDGs, as this not only cultivates a deeper understanding of sustainability issues but also encourages the development of innovative solutions pertinent to local and global contexts, thereby transforming educational institutions into catalysts for

sustainable development (Sengupta et al., 2020; Kleespies & Dierkes, 2022; Shehu & Shehu, 2018; and Filho et al., 2019).

Furthermore, understanding the current awareness levels of the SDGs among students is essential for universities to assess their impact on promoting sustainability, as many students today exhibit limited knowledge of these global goals despite their increasing importance in educational discourse and policy (Kleespies & Dierkes, 2022).

Review of Related Literature

The United Nations Sustainable Development Goals serve as a global blueprint for achieving a sustainable future. This comprehensive agenda highlights the essential role that education plays in equipping learners to actively participate in sustainable development initiatives, which is particularly pertinent in the context of higher education institutions (Crespo et al., 2017). In particular, universities are being called to rethink their pedagogical approaches to integrate the SDGs systematically, thereby enhancing student engagement and awareness through innovative teaching methods and curriculum reforms that align with these global objectives (Filho et al., 2019). Research indicates that while some universities have initiated programs to embrace the SDGs within their curriculums, many still lag behind in fully realizing the transformative potential of these goals within their teaching and research frameworks, emphasizing the critical need for a proactive approach to foster SDG awareness and integration among the student population. (Filho et al., 2019) (Shehu & Shehu, 2018; Fia et al., 2022)

Existing literature suggests that assessing the current levels of SDG awareness and engagement among students is a crucial first step in designing effective strategies to enhance their participation in sustainable development efforts. This assessment not only provides insights

into the existing knowledge gaps but also highlights the role of higher education institutions in promoting sustainability education as a fundamental component of their mission, thereby ensuring that students are adequately prepared to contribute to the achievement of the SDGs upon graduation. (Filho et al., 2019; Shehu & Shehu, 2018)

SDG Awareness

Several studies have explored the current state of SDG awareness among students in higher education institutions (Fia et al., 2022; Filho et al., 2019; Shehu & Shehu, 2018). For instance, research has shown that many students still possess limited knowledge regarding the specific goals and their implications for sustainable development, suggesting a pressing need for targeted educational interventions to bridge these gaps and promote a deeper understanding of the SDGs within university curricula (Krstić et al., 2020; Filho et al., 2019; and Kleespies & Dierkes, 2022). This lack of awareness not only hinders students' ability to actively engage with sustainability-related initiatives but also undermines their capacity to become agents of change in their respective communities.

Integration of SDGs in Higher Education

The integration of the SDGs into higher education curricula and campus operations has been a subject of growing interest in the academic community. Research indicates that implementing SDGs can enhance the relevance of academic programs by equipping students with critical skills and competencies necessary to address contemporary global challenges, thus fostering a more sustainable future for all (Molina et al., 2023). Moreover, the implementation of SDGs within academic frameworks encourages a transdisciplinary approach that can transcend traditional educational boundaries, enabling collaboration among various disciplines and

enhancing the overall learning experience for students, which is essential for fostering innovative solutions to complex, real-world problems (Kleespies & Dierkes, 2022).

Student Engagement and the Role of Higher Education Institutions

The active engagement of students in sustainability-related initiatives and decision-making processes within higher education institutions is crucial for the successful implementation of the SDGs. Research suggests that universities that promote student involvement in sustainability-focused projects, campus management, and community outreach activities can effectively cultivate a sense of ownership and empowerment among the student population, thereby enhancing their commitment to sustainable development. This involvement not only enriches the educational experience but also fosters a culture of sustainability that extends beyond the university environment, preparing students to take on leadership roles and contribute positively to their communities in the future, as many institutions are beginning to realize the importance of integrating the SDGs into their core operations, research, and curricula. Furthermore, by embedding the SDGs into their educational framework, higher education institutions can significantly influence student attitudes and behaviors towards sustainability, ultimately shaping a generation that is more informed and proactive about global challenges, thereby facilitating a stronger alignment with the overarching objectives of the 2030 Agenda for Sustainable Development.

It is evident that assessing the current levels of SDG awareness among students at Romblon State University is a critical first step in understanding their engagement with sustainability-related issues. This baseline assessment will inform the development of targeted strategies to enhance SDG integration within the university's teaching, research, and outreach

activities, ultimately empowering students to become active participants in the achievement of the 2030 Agenda for Sustainable Development.

Moreover, this assessment will help identify the specific barriers that students face in engaging with the SDGs, allowing for the design of tailored interventions aimed at increasing awareness, promoting active participation, and fostering a sustainable mindset among the student body. Additionally, understanding the current climate of awareness and the factors influencing student engagement will provide valuable insights for higher education institutions, enabling them to leverage existing resources and collaborations effectively, while also identifying gaps that necessitate targeted programming and support to enhance their contribution to sustainable development.

Recognizing these dynamics, it is essential for universities to continually assess their educational approaches and make necessary adjustments to align with the evolving landscape of sustainability education, thereby ensuring that students are not only aware of the SDGs but are also equipped with the knowledge and skills to become agents of positive change in their respective communities and beyond. Furthermore, it is imperative for higher education institutions to adopt a holistic approach that integrates the SDGs into their core operations and fosters a culture of sustainability; doing so will create an environment conducive to empowering students as informed advocates for sustainable practices, ultimately contributing to the realization of the 2030 Agenda for Sustainable Development.

The holistic integration of the SDGs into higher education institutions' frameworks can catalyze significant behavioral changes among students, positioning them as proactive drivers of sustainability initiatives within and outside the academic context. Research indicates that the holistic integration of the SDGs not only enhances the relevance of educational programs but

also catalyzes significant shifts in student behavior, fostering a proactive approach to sustainability initiatives within and beyond academic contexts, underscoring the critical role universities play in contributing to the achievement of the 2030 Agenda for Sustainable Development.(Krstić et al., 2020; Kleespies & Dierkes, 2022; Filho et al., 2019; and Hübscher et al., 2021).

Research Questions

1. What is the perceived level of SDG awareness of RSU students in terms of:
 - a. SDG recognition
 - b. Engagement with SDG-related activities
 - c. SDG integration in academic and research
 - d. SDG integration in campus environment
2. What SDGs are mostly visible and addressed in the RSU community as perceived by university students?
3. What are the barriers encountered by the university students in terms of SDG awareness?
4. Does the year level of RSU students predict their level of SDG Awareness?

Research Methodology

Research Design

This study used a descriptive-quantitative research design. This was utilized to determine the SDGs level of awareness among students in Romblon State University. This research method was profoundly discussed in the study of Odoom et al. (2024). This was conducted from August 1-23, 2024 among students in Romblon State University.

Participants and Procedures

A total of 2,267 student participants submitted their intent to participate in the survey were chosen through convenience sampling. This sampling method was also used in the study of Kumar et al. (2020) and Adekunle and Dakare (2020), who also took structural equation modeling as their statistical method.

Before the data gathering, the researchers sought approval of the university president, deans, directors of different units, and informed consent of the respondents. In the data gathering, the instrument was converted into google forms for easy dissemination, until data saturation was achieved.

Data Analysis

After retrieval and data saturation, Excel and SPSS version 25 were used. Descriptive statistics such as mean, percentage, and standard deviation were used in the analysis of the data. Structural Equation Modeling (SEM) was utilized to test the predicting power of year level on the SDG awareness of students, using SMART PLS version 4.0.

RESULTS

Assessing the level of SDG integration within a university is vital for ensuring that the institution effectively contributes to global sustainability efforts. It enables universities to align their educational programs, student activities, research, operations, and community engagement with the SDGs, thereby preparing students to tackle global challenges, enhancing the impact of academic work, demonstrating commitment through sustainable practices, and fostering meaningful community partnerships.

Table 1

The Level of Sustainable Development Goals' Awareness of Romblon State University Students

Sustainable Development Goals (SDGs) recognition	Mean	<i>SD</i>	<i>DI</i>
---	-------------	------------------	------------------

1. Familiarity with the Sustainable Development Goals (SDGs).	4.53	1.29	VH
2. Consciousness and understanding of the SDGs.	4.08	0.67	H
3. Recognition on the importance of SDG.	4.73	0.48	VH
Total	4.45	0.81	H
Engagement with SDG Related Activities	Mean	SD	DI
1. The students lead SDG-related activities or initiatives at the university	4.53	1.28	VH
2. The university provides SDG-related activities or initiatives at the university	4.29	1.53	H
Total	4.41	1.41	H
SDG Integration in Academic and Research			
1. The university incorporates SDGs into its operations such as academic, research and administration.	4.45	0.56	H
2. The university courses includes topics related to the SDGs.	4.08	0.79	H
4. There is an integration of SDG topics into the courses.	4.19	0.65	H
5. SDGs are integrated into the college/institute academic offerings.	4.35	0.58	H
6. The college/institute conducts SDG related research or projects.	4.22	0.68	H
Total	4.26	0.65	H
SDG Campus Environment			
1. Visibility of information and dissemination materials about the SDGs in the campus	4.10	0.71	H
2. There is a presence of student organizations focused on SDGs in the college/institute.	3.94	0.89	H
3. The university faculty members discuss SDGs in the department.	4.10	0.73	H
4. The college/institute organizes events or activities related to the SDGs.	4.26	0.64	H
5. The college/institute encourages the students to participate in SDG-related activities.	4.29	0.62	H
Total	4.23	0.81	H

Legend: 4.5-5.0= *Very High (VH)*,
3.5-4.49= *High (H)*
2.5- 3.49=*Moderate (M)*
1.5-2.49=*Low (L)*
0-1.49=*Very Low (VL)*

Table 1 reveals that Romblon State University students exhibit a high level of awareness regarding the Sustainable Development Goals (SDGs). The highest level of awareness is observed in students' recognition of the importance of the SDGs, with a mean score of 4.73 (SD = 0.48), underscoring a profound appreciation for the relevance of these goals. Conversely, the lowest score within this dimension pertains to the "Consciousness and understanding of the

SDGs," which stands at 4.08 (SD = 0.67). Although this score remains high, it suggests that while students recognized the SDGs' significance, there may be opportunities to enhance their deeper understanding of the goals' complexities and implications.

In terms of engagement, students exhibit the highest involvement in leading SDG-related activities, evidenced by a mean score of 4.53 (SD = 1.28). This reflects a strong student-led initiative in promoting SDGs. However, the lowest engagement score is associated with the university-provided SDG-related activities (M = 4.29, SD = 1.53). This indicates a need for more consistent and expansive university support in facilitating SDG-related initiatives.

The integration of SDGs into academic and research activities is particularly strong in the area of university operations, with a mean score of 4.45 (SD = 0.56). This high score indicates effective incorporation of SDGs into the university's broader operational framework. In contrast, the integration of SDG-related topics into university courses scored the lowest in this dimension, with a mean of 4.08 (SD = 0.79). This suggests a potential gap in the inclusion of SDG content within the academic curriculum that could be addressed to strengthen educational alignment with global sustainability goals.

Further, the campus environment shows robust support for SDGs, particularly in encouraging student participation in SDG-related activities (M = 4.29, SD = 0.62). This high score reflects strong institutional backing for student engagement in sustainability initiatives. Conversely, the lowest score is seen in the presence of student organizations focused on SDGs, with a mean of 3.94 (SD = 0.89). This points to a relative deficiency in the visibility and activity of student organizations dedicated to SDGs, highlighting an area for potential enhancement to foster a more vibrant SDG-focused campus culture.

Table 2

Sustainable Development Goals' Visibility in the RSU Community as perceived by University Students

Sustainable Development Goals (SDGs)	Frequency (f)	Percentage (%)
SDG 1: No Poverty	1082	47.73
SDG 2: Zero Hunger	774	34.14
SDG 3: Good Health and Well-being	1327	58.54
SDG 4: Quality Education	1414	62.37
SDG 5: Gender Equality	1204	53.11
SDG 6: Clean Water and Sanitation	994	43.85
SDG 7: Affordable and Clean Energy	698	30.79
SDG 8: Decent Work and Economic Growth	658	29.03
SDG 9: Industry, Innovation, and Infrastructure	618	27.26
SDG 10: Reduced Inequalities	547	24.13
SDG 11: Sustainable Cities and Communities	617	27.22
SDG 12: Responsible Consumption and Production	578	25.50
SDG 13: Climate Action	774	34.14
SDG 14: Life Below Water	450	19.85
SDG 15: Life on Land	506	22.32
SDG 16: Peace and Justice Strong Institutions	694	30.61
SDG 17: Partnerships for the Goals	660	29.11
Total	2267	100

Table 2 provides the data on the visibility of Sustainable Development Goals (SDGs) within the Romblon State University (RSU) community, as perceived by university students, revealing varying levels of recognition for each goal. The most recognized SDGs are "Quality Education" (62.37%), "Good Health and Well-being" (58.54%), and "Gender Equality" (53.11%), indicating a strong awareness and visibility of these goals among students. Conversely, SDGs with the lowest perceived visibility include "Life Below Water" (19.85%),

"Life on Land" (22.32%), and "Reduced Inequalities" (24.13%). This variation in visibility reflects differing levels of emphasis and engagement with the SDGs across the university community.

Nonetheless, while goals related to education, health, and gender equality are prominently recognized, there appears to be less awareness and visibility for goals related to environmental sustainability and inequality. This discrepancy highlights areas where increased focus and educational efforts could enhance understanding and visibility of these critical global objectives, fostering a more comprehensive engagement with all 17 SDGs.

Table 3

Barriers Encountered by the University Students in Addressing SDG Awareness

Barriers encountered	Frequency (f)	Percentage (%)
1. Lack of awareness and understanding about the SDGs	1786	78.78
2. Insufficient funding and resources	939	41.42
3. Political conflicts and instability	605	26.69
4. Inequality and injustice	604	26.64
5. Lack of collaboration and cooperation	1167	51.48
6. Environmental degradation and climate change	917	40.45
7. Corruption and unethical practices	899	39.66
Total	2267	100

The data on barriers encountered by Romblon State University students in addressing SDG awareness, as presented in Table 3, highlights several key challenges. During the data gathering, respondents were asked about the barriers of SDGs as many as they can. The most significant barrier reported is a "Lack of awareness and understanding about the SDGs," affecting 78.78% of students. This indicates that a fundamental gap in knowledge is the primary

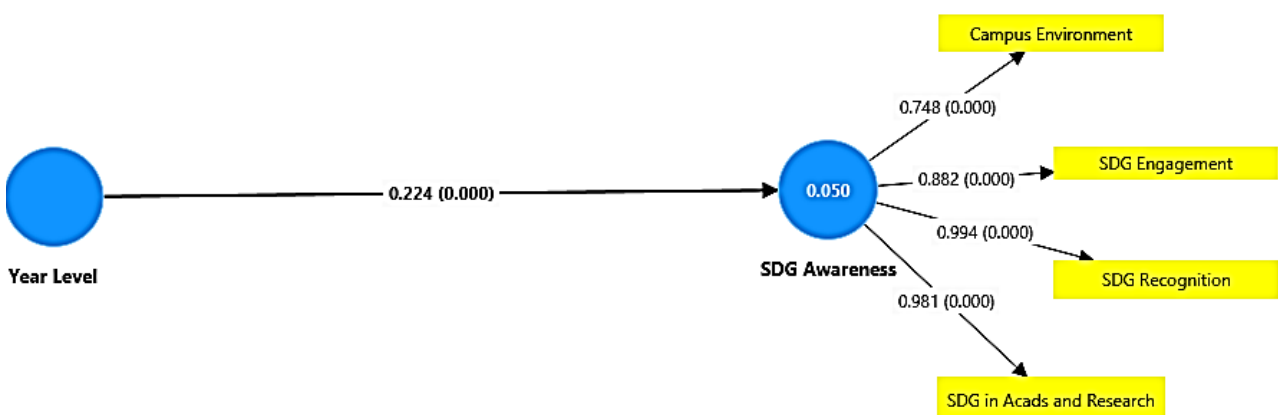
obstacle to SDG engagement. Other notable barriers include "Lack of collaboration and cooperation" (51.48%) and "Insufficient funding and resources" (41.42%), which also impede efforts to enhance SDG awareness and action.

Additionally, barriers such as "Environmental degradation and climate change" (40.45%) and "Corruption and unethical practices" (39.66%) reflect systemic issues that further complicate the promotion and integration of SDGs. Political conflicts and instability (26.69%) and issues of inequality and injustice (26.64%) are less frequently cited but still represent significant challenges. Overall, addressing the predominant barrier of inadequate awareness and understanding, alongside improving collaboration and resource availability, could significantly enhance students' capacity to engage with and promote the SDGs effectively.

Figure 1 depicts the structural relationship between university students' year level and their SDG awareness in Romblon State University. It could be gleaned in the figure the structural mode; shows a direct positive relationship between Year Level and SDG Awareness among RSU students, with a path coefficient of 0.224 (< 0.001).

Figure 1

The Structural Relationship Between Students' Year Level and SDG Awareness



This indicates that as students progress through their academic years, their awareness of Sustainable Development Goals (SDGs) tends to increase. The relationship is statistically significant, suggesting a consistent pattern across the student population. However, the moderate strength of the prediction ($R^2 = 0.224$) suggests that while year level contributes to SDG awareness, other factors not captured in this model may also be influential.

Discussion

The high level of SDG awareness and engagement among RSU students is promising, aligning with global trends in higher education towards sustainability integration (Leal Filho et al., 2019). However, the discrepancy between recognizing SDGs' importance and fully understanding them mirrors challenges identified in other studies (Décamps et al., 2017).

The strong student-led initiatives in SDG-related activities at RSU are commendable, reflecting a growing trend of youth engagement in sustainability issues (Dlouhá et al., 2019). However, the lower score for university-provided activities suggests a need for stronger institutional support, which is crucial for comprehensive SDG integration in higher education (Findler et al., 2019).

The uneven visibility of different SDGs at RSU, with a focus on education, health, and gender equality, while environmental and inequality-related goals lag behind, is noteworthy. This imbalance could lead to a skewed understanding of sustainable development, potentially hindering holistic approaches to sustainability challenges (Salvia et al., 2019).

The identified barriers, particularly the lack of awareness and understanding, echo findings from other studies on SDG implementation in universities (Ávila et al., 2019).

Addressing these barriers through targeted educational programs, increased collaboration, and improved resource allocation could significantly enhance SDG integration and awareness at RSU.

This study further implies that the university environment and curriculum may play a crucial role in developing students' understanding of global sustainability issues over time (Pálsdóttir & Jóhannsdóttir, 2021; Pallant et al., 2020; and Chaleta et al., 2021). Higher year levels likely correspond to increased exposure to SDG-related concepts through coursework, campus initiatives, and peer interactions.

Conclusions and Recommendations

The study of Sustainable Development Goals (SDGs) integration at Romblon State University (RSU) reveals a high level of SDG awareness among students, particularly in recognizing their importance. However, there is a gap between recognition and deep understanding of the SDGs, as well as uneven visibility of different goals within the university community. While student-led initiatives are strong, there is room for improvement in university-provided SDG-related activities and curriculum integration. The primary barriers to SDG implementation include lack of understanding, insufficient collaboration, and inadequate resources.

To address these findings, it is recommended that RSU develop a comprehensive SDG education program to foster deeper understanding across all 17 goals. This should be complemented by strengthening institutional support through establishing dedicated SDG offices or committees and allocating specific funding for SDG-related projects and research. Curriculum alignment is crucial, requiring a thorough review to integrate SDG content across academic

programs. Additionally, efforts should be made to balance SDG visibility by increasing awareness of less recognized goals, particularly those related to environmental sustainability and inequality.

Implementation of these recommendations should include launching awareness campaigns, creating collaborative working groups, and seeking external partnerships. A robust monitoring and evaluation system should be established to track progress and identify areas for improvement. Investing in capacity building for faculty and staff, along with further empowering students in SDG leadership roles, will enhance the university's overall commitment to sustainable development.

Furthermore, while RSU demonstrates strong initial steps towards SDG integration, there are clear areas for improvement. Enhancing curriculum alignment with SDGs, providing more institutional support for SDG-related activities, and addressing the awareness gap could significantly boost the university's contribution to sustainable development.

By taking these steps, RSU can build on its existing strengths, address current gaps, and position itself as a leader in sustainable development education and practice, contributing significantly to broader sustainability efforts in the region and beyond.

References

Ávila, L. V., Leal Filho, W., Brandli, L., Macgregor, C. J., Molthan-Hill, P., Özuyar, P. G., & Moreira, R. M. (2019). Barriers to innovation and sustainability at universities around the world. *Journal of Cleaner Production*, 164, 1268-1278.

- Chaleta, E., Saraiva, M., Leal, F., Fialho, I., & Borralho, A. (2021). Higher education and sustainable development goals (SDG)—potential contribution of the undergraduate courses of the school of social sciences of the University of Évora. *Sustainability*, 13(4), 1828.
- Crespo, B., Míguez-Álvarez, C., Fariña, M E A., Alonso, M C., & Míguez, J. (2017). The Sustainable Development Goals: An Experience on Higher Education. *Multidisciplinary Digital Publishing Institute*, 9(8), 1353-1353. <https://doi.org/10.3390/su9081353>
- Décamps, A., Barbat, G., Carteron, J. C., Hands, V., & Parkes, C. (2017). Sulitest: A collaborative initiative to support and assess sustainability literacy in higher education. *International Journal of Management Education*, 15(2), 138-152.
- Dlouhá, J., Henderson, L., Kapitulčinová, D., & Mader, C. (2019). Sustainability-oriented higher education networks: Characteristics and achievements in the context of the UN DESD. *Journal of Cleaner Production*, 172, 4263-4276.
- Fia, M., Ghasemzadeh, K., & Paletta, A. (2022, June 24). How higher education institutions walk their talk on the 2030 agenda: A systematic literature review. *Palgrave Macmillan*, 36(3), 599-632. <https://doi.org/10.1057/s41307-022-00277-x>
- Filho, W L., Shiel, C., Paço, A., Mifsud, M., Ávila, L V., Brandli, L., Molthan-Hill, P., Pace, P., Azeiteiro, U M., Vargas, V R., & Caeiro, S. (2019). Sustainable development goals and sustainability teaching at universities: Falling behind or getting ahead of the pack?. *Elsevier BV*, 232, 285-294. <https://doi.org/10.1016/j.jclepro.2019.05.309>
- Findler, F., Schönherr, N., Lozano, R., Reider, D., & Martinuzzi, A. (2019). The impacts of higher education institutions on sustainable development: A review and conceptualization. *International Journal of Sustainability in Higher Education*, 20(1), 23-38.

- Hübscher, C., Hensel-Börner, S., & Henseler, J. (2021, September 15). Social marketing and higher education: partnering to achieve sustainable development goals. *Emerald Publishing Limited*, 12(1), 76-104. <https://doi.org/10.1108/jsocm-10-2020-0214>
- Kleespies, M W., & Dierkes, P W. (2022, June 29). The importance of the Sustainable Development Goals to students of environmental and sustainability studies—a global survey in 41 countries. *Palgrave Macmillan*, 9(1). <https://doi.org/10.1057/s41599-022-01242-0>
- Krstić, M., Filipe, J., & Chavaglia, J. (2020, August 15). Higher education as a determinant of the competitiveness and sustainable development of an economy. *Multidisciplinary Digital Publishing Institute*, 12(16), 6607-6607. <https://doi.org/10.3390/su12166607>
- Leal Filho, W., Shiel, C., Paço, A., Mifsud, M., Ávila, L. V., Brandli, L. L., & Caeiro, S. (2019). Sustainable development goals and sustainability teaching at universities: Falling behind or getting ahead of the pack? *Journal of Cleaner Production*, 232, 285-294.
- Molina, Á A., Helldén, D., Alfvén, T., Niemi, M., Leander, K., Nordenstedt, H., Rehn, C., Ndejjo, R., Wanyenze, R K., & Biermann, O. (2023, March 31). Integrating the United Nations sustainable development goals into higher education globally: a scoping review. *Taylor & Francis*, 16(1). <https://doi.org/10.1080/16549716.2023.2190649>
- Pallant, E., Choate, B., & Haywood, B. (2020). How do you teach undergraduate university students to contribute to UN SDGs 2030?. *Universities as Living Labs for Sustainable Development: Supporting the Implementation of the Sustainable Development Goals*, 69-85.
- Pálsdóttir, A., & Jóhannsdóttir, L. (2021). Signs of the United Nations SDGs in university curriculum: the case of the University of Iceland. *Sustainability*, 13(16), 8958.

- Salvia, A. L., Leal Filho, W., Brandli, L. L., & Griebeler, J. S. (2019). Assessing research trends related to Sustainable Development Goals: Local and global issues. *Journal of Cleaner Production*, 208, 841-849.
- Schulz, A., Shriver, C., Patka, A., Greiner, C., Seleb, B., Hull, R W., Sullivan, C., Klein, J T., & Moore, R. (2023, July 3). *Intradisciplinary growth of sustainability-minded engineers through conservation technology*. Cold Spring Harbor Laboratory.
<https://doi.org/10.1101/2023.07.03.546429>
- Sengupta, E., Blessinger, P., & Yamin, T S. (2020, June 19). *Introduction to University Partnerships for Sustainable Development*. Emerald Publishing Limited.
<https://doi.org/10.1108/s2055-364120200000020004>
- Shehu, M., & Shehu, H. (2018, January 1). Knowledge, Attitude and Perception About Sustainable Developmental Goals (SDGs) Among Clinical Medical Students of Bingham University Teaching Hospital. *Jos. Science Publishing Group*, 4(4), 130-130.
<https://doi.org/10.11648/j.jher.20180404.12>